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EXAMINER

NGHIEM, MICHAEL P

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,950

Applicant(s)

SCHUTZBACH ET AL.

Examiner

Michael P Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22, 25-35 and 38-47 is/are rejected.
- 7) ☒ Claim(s) 23, 24, 36 and 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract contains more than 150 words.

The abstract of the disclosure is objected to because "In" (line 12) should be – If -  
-: Correction is required. See MPEP § 608.01(b).

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).  
Correction of the following is required: Claims 16, 29, "...the alarm device being integral with the processor" is not described in the specification.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sensor (claims 13, 26, 39), processor (claims 13, 26), and memory (claims 13, 26, 39) must be shown or the feature(s) cancelled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claim 39 is objected to because of the following informalities:

- Is the claimed subject matter "a storage medium" or a "software"? It seems like this claim does not have a transitional phrase.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-18, 20-22, 25-31, 33-35, 38-40, and 42-47 are rejected under 35

U.S.C. 102(b) as being anticipated by Stevens (US 5,942,698).

Stevens discloses all the claimed features of the invention including:

- a method and system for monitoring and analyzing flow in a sewer system (Fig. 7), comprising:

- collecting, using a monitoring assembly (Fig. 7), data representative of actual flow volume in a first location (column 2, lines 41-44);

- storing the data representative of actual flow volume in a memory (plotted data are stored in 60, Fig. 7);

- maintaining, in the memory, previously stored data representative of previous flow volumes (column 4, lines 34-39);

- determining a predicted flow volume, wherein the predicted flow volume is dependent upon data selected from the previously stored data and a day and time (column 3, lines 39-50), wherein the day and time each correspond to both the data selected from the previously stored data and the data representative of actual flow volume (column 4, lines 32-55);

- comparing the actual flow volume with the predicted flow volume to yield a difference value (column 1, lines 32-39);

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- the difference value exceeds a predetermined variance value, and the method further comprises the step of issuing a flow loss notification (overflow alarm at one location, Abstract, lines 7-9, indicates a flow blockage at another (column 2, lines 57-61);

- the difference value is equal to or less than a predetermined variance value, and the method further comprises storing the actual flow volume in the memory as stored calibration data (normal flow data 38, 40, Fig. 5);

- collecting data representative of actual flow volume includes the steps of collecting data representative of flow velocity and data representative of depth (via 16);

- calculating the data representative of actual flow volume using the data representative of flow velocity and the data representative of depth (via 60, 62, column 4, lines 34-46), and the method further comprising the step of transmitting at least one of the data representative of flow velocity, data representative of depth, and data representative of actual flow volume over a data network to a computing device (data from 16 to 60, 62, Fig. 7);

- the data representative of actual flow volume includes data representative of a rolling average flow volume (flow meter 16 reads "averaged out" flow data);

- the data representative of actual flow volume includes at least one of flow velocity data and depth data (column 2, lines 42-44);

- at least one of the determining step and the comparing step is performed by the monitoring assembly (via 64, 66, Fig. 7);

- at least one of the determining step and the comparing step is performed by a computing device (64, 66);
- validating the data representative of flow velocity and the data representative of depth (column 4, lines 50-55);
- the validating step is performed by the monitoring assembly (62, Fig. 7);
- the predicted flow volume is further dependent upon additional data selected from the previously stored data, the additional data corresponding to a rain event (column 1, lines 9-10);
- a first monitoring assembly (Fig. 7) having at least one sensor (sensor of 16), wherein the at least one sensor is operative to detect data representative of actual flow volume of a fluid substance at a first location (Fig. 1);
- a processor (60) in communication with the first monitoring assembly;
- a memory (memory in 60), wherein the memory is operative to store the data representative of actual flow volume and a detection time associated with said data (column 1, lines 61-64);
- a central computing device (64, 66) in communication with the first monitoring assembly (Fig. 7),
- an alarm device (66), the alarm device being integral with the processor, and the alarm device being configured to selectively issue an alarm based on the difference value (Fig. 7);
- a current threshold value is computed on the basis of the predicted flow volume and the actual flow volume (column 1, lines 23-39), the current threshold value being

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updated periodically (Abstract, lines 1-5), and wherein the alarm device is configured to issue an alarm when the actual flow volume is less than the current threshold value (overflow alarm indicates flow blockage, column 2, lines 48-51);

- an alarm is issued by the alarm device, the first monitoring assembly is configured to communicate the alarm (column 4, lines 65-67);

- the processor is integral with the first monitoring assembly (Fig. 7);

- the processor is integral with the central computing device (Fig. 7);

- the central computing device is trained to predict at least one of an anticipated flow velocity, an anticipated depth, and an anticipated flow volume of the fluid substance at a second location (column 2, lines 1-3).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 19, 32, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens.



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Stevens further discloses that the flow monitoring is provided to indicate abnormal conditions at locations remote from the location of the flow detector (column 2, lines 1-3).

Therefore, even though Stevens does not disclose communicating the flow loss notification by at least one of a cellular telephone means, a land line telephone means, a pager, an electronic mail means, and an Internet means, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to communicate via the Internet for the purpose of reaching a remote area.

#### ***Allowable Subject Matter***

7. Claims 23, 24, 36, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Reasons For Allowance***

8. The combination or method as claimed wherein a means for detecting a quantity of rain at a location during a period of time (claims 23, 36) is not disclosed, suggested, or made obvious by the prior art of record.

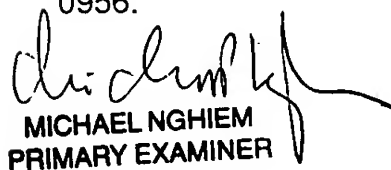
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**Contact Information**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
MICHAEL NGHIEM  
PRIMARY EXAMINER

Michael Nghiem

September 16, 2003